

WHAT IS CLAIMED IS:

1. A method of storing an e-mail communication containing an attachment file received in an e-mail server, comprising the steps of:

(a) searching a database of attachment files previously stored in the e-mail server for a copy of the attachment file from the received e-mail

communication; and,

if a copy of the attachment file is located in the e-mail server,

(b) removing the attachment file from the e-mail communication; and

(c) creating a link from the e-mail communication to the previously stored attachment file in the database.

2. The method of storing an e-mail communication containing an attachment file received in an e-mail server according to claim 1, further comprising the steps of:

if a copy of the attachment file is not located in the e-mail server,

(d) separating the attachment file from the e-mail communication and separately storing the attachment file in the database; and

(e) creating a link from the e-mail communication to the corresponding attachment file stored in the database.

3. The method of storing an e-mail communication containing an attachment file received in an e-mail server according to claim 1, further comprising

the step of detecting the size of the attachment file associated with the received e-mail communication,

wherein the steps of searching the database, removing the attachment file from the e-mail communication; and creating a link from the e-mail communication
5 are only performed if the attachment file is greater than a predetermined size.

4. The method of storing an e-mail communication containing an attachment file received in an e-mail server according to claim 1, wherein the database of attachment files is searched by performing a checksum against the
10 attachment file of the received e-mail communication.

5. The method of storing an e-mail communication containing an attachment file received in an e-mail server according to claim 1, wherein the database of attachment files is searched by comparing properties associated with
15 the attachment files with corresponding properties associated with the attachment file of the received e-mail communication.

6. The method of storing an e-mail communication containing an attachment file received in an e-mail server according to claim 1, further comprising
20 the steps of:

(c) deleting the link from e-mail communication to the attachment file in response to a delete request; and

(d) deleting the corresponding attachment file when there are no links remaining to the attachment file.

7. A method of storing attachment files to e-mail communications received in an e-mail server, comprising the steps of:

(a) extracting header information from the e-mail communications and storing the e-mail header information in a mail store;

(b) extracting header information from the attachment file to be stored;

(c) comparing the extracted attachment file header information with header information from attachment files previously stored in the mail store to determine whether the attachment files received with the e-mail communications are duplicates of previously stored files; and

(d) if an attachment file is a duplicate, storing a link in the mail store between the e-mail header information and the previously stored attachment file.

8. The method of storing attachment files to e-mail communications according to claim 7, further comprising the step of:

(e) if an attachment file is not a duplicate of a previously stored attachment file, storing the attachment file in the mail store and storing a link in the mail store between the e-mail header information and the attachment file to the received e-mail communication.

9. The method of storing attachment files to e-mail communications according to claim 8, further comprising the steps of:

(f) deleting the e-mail header information stored in the mail store and the link between the e-mail header information and the corresponding attachment file in response to a delete request; and

(g) deleting the corresponding attachment file if there are no links remaining to the attachment file.

10. The method of storing attachment files to e-mail communications according to claim 7, wherein e-mail messages in the e-mail communications are stored with the corresponding e-mail header information in the mail store.

11. The method of storing attachment files to e-mail communications according to claim 7, wherein the header information extracted from the attachment files includes a designation of file type.

12. The method of storing attachment files to e-mail communications according to claim 11, wherein the step of comparing extracted attachment file header information is performed by searching the previously stored attachment files that are designated as the same file type as the attachment file to the received e-mail communication.

13. The method of storing attachment files to e-mail communications according to claim 11, wherein the header information extracted from the attachment files further includes at least one of: size, creation date, revision date, author, software type, version, and revision number.

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14. The method of storing attachment files to e-mail communications according to claim 7, wherein the step of comparing extracted attachment file header information is performed only when the size of the attachment file is greater than a predetermined size.

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15. An e-mail communications server comprising:

(a) an MTA server for receiving e-mail communications from an external network;

(b) a mail store for storing e-mail communications received by the MTA server;

(c) a POP server for downloading e-mail communications from the mail store to client computers through an internal network; and

(d) e-mail attachment file checking software for determining whether attachment files in received e-mail communications are duplicates of attachment files in the mail store,

wherein the mail store removes duplicate attachment files from e-mail communications and creates links from received e-mail communications to the corresponding attachment files in the mail store.

16. The e-mail communications server according to claim 15, wherein the mail store further comprises a database for storing the links from received e-mail communications to the attachment files.

17. The e-mail communications server according to claim 16, wherein the mail store further comprises a first attachment storage database for storing attachment files that are each associated with a single e-mail communication, and a

second attachment storage database for storing attachment files that are each associated with a plurality of e-mail communications.

18. The e-mail communications server according to claim 15, further
5 comprising e-mail file attachment size checker software for detecting the size of
attachment files in received e-mail communications, wherein the e-mail attachment
file checking software only checks attachment files that are greater than a
predetermined size.

10 19. The e-mail communications server according to claim 15, wherein the
e-mail attachment file checking software extracts properties associated with the
attachment files in the received e-mail communications, and searches the mail store
for attachment files having the same properties.
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